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ABSTRACT

A unique two-way, interactive aural communications system operated by the University of Wisconsin-Extension and serving over 100 locations throughout the state is described and its application to distance music education is explained. A brief survey of telephone use in education is presented, as well as studies relating the effectiveness of distance learning. The concept of teleconferencing in bringing music instruction to a widely dispersed audience, allowing for the simultaneous distribution of music programs, is deemed one of the strong points of the Wisconsin system.

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DISTANCE LEARNING IN MUSIC THROUGH THE
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A SIX YEAR EXPERIENCE IN WISCONSIN ON A
STATE-WIDE BASIS

by

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State-Wide Communications Resource in Wisconsin

In Wisconsin there is a unique two-way, inter-active, aural communications system operated by University of Wisconsin-Extension called the Educational Telephone Network (ETN).

At over 100 locations throughout Wisconsin there are ETN Listening Locations (see appended map for distribution). These ETN Listening Locations are in every one of the 71 counties in the state, usually in the County Court House and managed through the office of the County Agent, who is a county-based member of the faculty of the University of Wisconsin-Extension; also, there are 27 ETN Listening Locations on the 14 two-year campuses and 13 four-year campuses of the University of Wisconsin System. (The mission of University of Wisconsin-Extension is to be the outreach arm for the total 27 campuses of the University of Wisconsin System and to program for the adult and continuing education needs of Wisconsin.)

The ETN Listening Location is a room especially equipped with a high fidelity speaker and microphones which are activated by depressing a bar at their base. These are called EDUCOM units. It is possible to make a presentation from, for example, Madison, and be heard at all 100 locations. A person at any location in the state can ask a question and be heard by the lecturer in Madison as well as the 99 other ETN Listening Locations throughout the state. What results is a state-wide classroom that's linked electronically. (See appended pictures showing the EDUCOM equipment and instructors teaching on this communications system.)

Since this communications system is carried on telephone lines, that's why it is called the Educational Telephone Network, it is possible for the instructor never to set foot in the state of Wisconsin. Such flexibility, therefore, makes it possible to utilize talent and expertise from any part of the country or even the world. In Appendix I, the places from which the instructor originated the program offering for the past six years are listed.

The transmission of music over this system is at an amazing fidelity. For teaching purposes, this system has proved most satisfactory. For example, the international concert pianist, Eugene Istomin, did a master class on the Beethoven "Waldstein" Piano Sonata from his living room overlooking Central Park in New York City and 150 piano teachers scattered throughout Wisconsin could question him on problems of interpretation.

This state-wide communications system uses approximately 5,000 miles of voice channels and the services of 20 different telephone companies in Wisconsin with dedicated lines. (See bibliographic reference numbers 4 and 25 for detailed descriptions of the technical aspects of the structuring of the Wisconsin system and its equipment.)

Expanding Effectiveness

The University of Wisconsin-Extension Music Department looked to the Wisconsin ETN system as a means to expand its effectiveness. Generally stated the mission of the University of Wisconsin-Extension Music Department is to provide opportunities in adult and continuing education in music on a state-wide basis.

There is a long and distinguished record in University of Wisconsin-Extension in bringing continuing education opportunities to all the citizens in the state. Today the 4 1/2 million Wisconsin residents are concentrated in the southeastern quadrant of the state, while the rest are dispersed, and some most sparsely in the northern regions, over a moderately large state -- 350 miles long and 250 miles wide. In the course of its 30 year history the University of Wisconsin-Extension Music Department has made conscious efforts to bring offerings in music to all regions of the state, regardless of population density.

Rising costs and budget constraints provided the impetus to explore a communications system for part of the programming of the University of Wisconsin-Extension Music Department. Taking traveling workshops to various regions in the state becomes a very costly matter. Rarely can specialists devote a week or two to a project, as that long would be necessary if one is to adequately cover all regions in Wisconsin. Another complication is that sparsely populated regions, which need as well as deserve programming, do not have a sufficient population base to support all offerings.

Programming in music on ETN provided the opportunity to have state-wide impact which would be possible in no other way. Further, some of the talent, expertise and internationally acclaimed persons who have been programmed would be available in no other way. The convenience for a musician to be able to make a presentation from one's own office or home or even hotel room, such as overlooking the Space Needle in Seattle as happened once, is most attractive to busy people for whom time, and especially time lost in travel is a crucial factor.

A Six Year Experience

In Appendix I there is a chronological listing of the programs in music presented on ETN from Spring 1973 through Spring 1978. During this six year period, one can see that the programming has focused on four clientele groups: (1) private piano teachers; (2) private spinet organ teachers; (3) elementary and secondary school music educators; and (4) church musicians. From the chronology it can be seen these various clientele groups were gradually added. After the initial efforts with private piano teachers proved successful then additional groups were attempted.

The concept of distance learning, which results when using a communications system like ETN, is usually totally new for everyone. Because face-to-face learning situations are the predominant mode in learning, everyone is conditioned to expect the physical presence of an instructor. At first everyone is hesitant and skeptical. Once one experiences an ETN offering then the potential of this mode of instruction is sensed. The obvious advantages are: (1) convenience to one's home and conserving expense and time in travel to distant locations; (2) resources available, perhaps in no other type of offering; and (3) opportunity to personally question and discuss ideas and problems with some of the most insightful and experienced thinking in a particular field of music today.

While the Wisconsin ETN system began in 1965, and music programming on it began in 1973, there are vast numbers of people who do not understand this system and who have not participated in programming on it.

Distance learning is never intended to replace face-to-face learning situations; however, it can bring unique dimensions and rich resources to one's total continuing education, which, perhaps, would be available in no other way.

The data in Appendix II indicates that in 1977-1978, there were some offerings which had from 13% to 100% of the registrants who experienced ETN for the first time. This data also indicates that with all clientele groups for whom there has been programming there is almost unanimous desire for more programming on ETN.

Distance learning is a new concept and new ideas take time to be universally accepted and utilized. When programming is begun with distance learning there must be a long-term commitment towards such an approach.

From Appendix I it can be seen that the effort for elementary and secondary school music educators beginning in 1975-76 was to provide a year-long comprehensive program. Conscious efforts were made to provide for the various levels of music education (elementary and secondary) as well as for the categories of vocal and instrumental music teachers. Further, topics as well as personnel were selected which reflected expressed needs as well as pressing issues at those times.

For two years, in 1975-1976 and 1976-1977, efforts were made to interest the Student MENC Chapters in Wisconsin to experience ETN. The programming was designed on issues which the collegiate music education major faces during the first year of teaching. Undoubtedly, this was the first time for a state-wide meeting of Student MENC Chapters on a communications system.

As can be seen from Appendix I most of the offerings were two or three or four session series on a non-credit basis. There is a tremendous challenge in programming non-credit offerings for adult and continuing education. Since there is no requirement for attendance other than professional self-improvement, relevancy and practicality of subject matter is so crucial.

In 1977-1978, there is the first offering of a graduate credit course in music education. Data is not yet developed on this, but initial response is such that another graduate credit course is planned for 1978-1979. (It is believed that this offering in music will be as effective as previous credit studies in distance learning have been as those referred to in the section, "Effectiveness in Distance Learning," below.)

The private piano and spinet organ teachers indicate they prefer three or four session series. The two or three session series for music educators provides the opportunity to focus on an array of subject matter on a broader basis than a semester long credit course.

Church musicians are seeming to look to the two or three or four session non-credit series. Programming for this clientele group was first attempted in 1977-1978. With some 5,000 churches of all denominations in Wisconsin there is a tremendous potential for this area.

While lecture and discussion are the obvious approaches to use on a two-way, inter-active communications system like Wisconsin's ETN, it is possible to use

music when the proper equipment is available as in Wisconsin. During these six years the following instruments have been effectively taught in their respective program formats: piano, cello, oboe and violin. In the cello, oboe and violin offerings, demonstrating high school students brought their instruments to their ETN Listening Location, wherever it was in the state. By their teacher holding the ETN microphone near the cello or violin bridge or oboe bell it was possible for them to play and be critiqued by the master teacher conducting the session. As a result of ETN it was possible, for example, for a cellist in far northern Wisconsin to be heard by a master teacher 300 miles away and to be critiqued in playing. Obviously, a teacher on ETN in such a situation concentrates on what is heard and does not focus on visual aspects for which face-to-face teaching is necessary. However, if one accepts that music is an aural art, a communications system is capable of providing supplementary coaching which probably could be available in no other way to remote regions of a state. Of course, such potential holds vast ramifications for music on what can be done to supplement teaching with specialists and master teachers, as well as reach remote regions with expertise.

Nothing has been done with student pianists up to this point, since pianos are not yet available in these ETN Listening Locations. However, all of the offerings for piano teachers have involved instructors using the piano for demonstration purposes. Master classes by internationally acclaimed concert artists like the late Gina Bachauer, Eugene Istomin and Eugene List, have been most effective. Likewise, presentations by piano pedagogues from all parts of the country and their demonstrating examples have been most successful. In all of these offerings for piano teachers it was presenting personnel from other parts of the country who perhaps would never be available for face-to-face presentations in the state.

In an effort to encourage private piano teachers to pursue a certification program, a series on "Preparation for Certification" was begun in the spring of 1977. A most talented and versatile instructor most ably presented a review of basic music theory, both the aural and written aspects. This series demonstrated dynamically that a communications system like Wisconsin's ETN can be used to teach music theory. Further, a radiant and vibrant teacher can extend his enthusiasm for his subject and encourage adults to develop written and aural skills in music theory. In Appendix IV there is data on the educational backgrounds of piano teachers in Wisconsin which substantiates the need to provide programming in this area.

Brief Survey of Using the Telephone in Education

The first reported instructional application of the telephone was in 1939 when in Iowa a group of homebound and hospitalized secondary school students received instruction via telephone. (29) The first reported instruction using the telephone for the post secondary level occurred in 1947 at the College of Dentistry of the University of Illinois, Chicago Medical Campus. (29) Stephens College in Columbia, Missouri is generally credited with the first organized application of the telelecture principle as well as linking other colleges into in-service training of science faculty. (29) Since 1958 Stephens College has used the amplified telephone as a means to add to the substance and range of the individual classroom by using such speakers as Senator Robert Taft, Harold Stassen and Norman Cousins; further projects involved programming with a group of small liberal arts colleges. (21)

In 1960, the University of Omaha began a telelecture program, which was soon followed by joining with the University of Colorado to share instructors on undergraduate courses. (25)

West Virginia University in 1966 began in-service training for isolated Appalachian school administrators using the telelecture principle. (25)

The literature has many references to using the telephone for educational purposes. Some selected cases are cited in bibliography references 2, 6, 7, 20, 22, 27, 31, 32 and 34.

A recent example reported on using the telephone for lecture purposes in music is at Northeast Missouri State University. (33)

It was in 1965 that the first efforts began in developing the state-wide Wisconsin system. Since that date the two-way, inter-active communications system known as ETN has grown and expanded to its present state of sophistication, quality and state-wide coverage.

A directory of the existing communication networks is found in Appendix IV. Persons in adult and continuing education in music perhaps could use these networks as a springboard for programming. If the network does not possess the technical equipment for transmission of music, drawing upon the potential for inter-active lecture and discussion is a beginning.

Effectiveness in Distance Learning

Several studies have been reported on the effectiveness of distance learning.

In 1970 Vernon Pellett (26) compared the effectiveness of lecture presentations using the Wisconsin ETN and face-to-face situations of conventional district in-service training meetings for County Extension Agents. On the knowledge test scores were 20.62 for the ETN group and 20.31 for the face-to-face group.

In 1972 Donald Hoyt and David Frye (12) reported on six undergraduate classes in education taught remotely along with identical classes on campus at Kansas State University in Manhattan. Judged on academic achievement both groups were equally successful.

In 1973 Ben K. Gold (5) of Los Angeles City College reported on an adult education class in organization and management theory for employees of the Pacific Telephone Company. It was found that 92% received a grade of A, B or C and the student response was highly favorable to being able to have this educational offering at their employment location.

In 1963 Thomas Beattie and Paul Frick (1) reported on a project with high schools. Graduate instruction in reading diagnosis for 69 teachers in 14 school districts was reported in 1968. (8) Graduate instruction in library science at Kent State University (1) and at the University of Missouri-Columbia (9) were reported in 1972 and 1973. A course in educational technology was presented by the University of Sweden in 1976 and reported by Rune Flinck. (3)

In 1977 Myrliss Hershey (11) reported that in a graduate course for teacher in-service on "The Creative Classroom" the students using their telenetwork at

Kansas State University had scores significantly higher than the face-to-face group.

In Appendix IX there is a sampling of statements from students who have experienced ETN program offerings in music in Wisconsin, indicating their favorable reaction to the concept of distance learning.

Five Year Study of One Clientele Group: Private Piano Teachers Using ETN for the Spring Piano Teachers Forum

In Appendix IV there is a five year study of Wisconsin's private piano teachers who have used ETN for professional continuing education.

The age distribution confirms many assumptions that a lot of piano teachers go into teaching after their children are in school. It is interesting to note the number of men teaching piano privately.

The educational backgrounds underscore the tremendous challenge there is in programming for the private piano teacher. In some years there have been almost 40% without a collegiate degree; of the degreed people, these studies did not probe the college major, let alone if there were courses in piano pedagogy.

Seeing the numbers now teaching spinet organ as well as console organ stresses the need to provide continuing education for those areas as well.

From the numbers of students taught per week one can make some assumptions on the number of teachers who are using piano teaching as supplementary income.

The involvement in some type of professional music organization causes concern. Since the private teacher is always alone in her home or studio without such daily contact with fellow piano teachers, such affiliation and the associated professional journals can be helpful to staying abreast with the field.

In contrast to required attendance in credit programs the non-credit adult education program is always a challenge. Conflicts always confront the adult. Likewise, motivation and maintaining interest are other factors. It is encouraging that 80% to 90% have attended the entire series each year.

Developing a desire on the part of the private teacher to look to ETN as an option in professional continuing education is shown in the number who have attended previous spring forums.

It is interesting to note that three session offerings have the most appeal to private teachers. With Wisconsin winters, fall and spring seem to be most desirable times for these offerings. Mornings and days early in the week would be expected as desirable programming times for this clientele group.

With the inflationary economy it is interesting to note how the \$12 factor for registration fee continues to be preferred.

Designing programming for private piano teachers is a never-ending challenge. With most teachers having the bulk of their students at the beginning and intermediate levels one can understand their desire for that emphasis in these offerings. However, there seems to be a fairly even distribution on from whom they would like

to have on these offerings: the specialist teaching youth, the specialist in piano pedagogy or the master teacher and concert artist.

Learning about the offerings from direct mail underscores the importance of developing mailing lists for specific clientele groups. However, the efforts involved in other promotions met about 1/3 of the enrollments.

After five years of programming, 30% to 40% experience ETV for the first time each year.

The effectiveness of distance learning can be seen in this group by the overwhelming desire to look to ETV for further offerings for their professional continuing education.

Techniques in Using Teleconferencing Principles

In the Norris A. Baird article in bibliographic reference 23, the following ideas are stressed:

1. Present short learning segments and then invite discussion.
2. Straight listening for ten minutes should be broken up with discussion and questions before the next learning segment is presented.
3. Repetition can be desirable for effectiveness.
4. Welcome letters aid in preparing students for learning.
5. A syllabus, outline, study questions, bibliographic lists, reading sources sent in advance to students to assist learning.
6. Biographical sketches and pictures of instructors aid students to visualize the unseen instructor.
7. Student rosters sent to all participants aid in students feeling part of a total group, even though dispersed at various listening locations.
8. Panel discussion, reactor panels, role playing, buzz groups, brainstorming, pre and post teleconference discussion are aids.
9. Planting questions and assigning feedback are also useful techniques.
10. Inviting written questions to be mailed in for consideration at the following session.

In Appendices V, VI, VII and VIII there are examples of materials used in music offerings:

1. Promotional brochures are developed for each music offering and sent to appropriate mailing lists. It is to be noted from the example in Appendix V:
 - a. Program content is described in detail in an effort to motivate clientele group to enroll.

- b. Biographical sketch of registrant to appear on slide presentation as well as assist students to identify each the various registrants. Present relating experience to not allow for privacy.
 - c. Citing the fact that registration fees are valid professional expenses for income tax purposes.
 - d. Listing assets and investments needed, if applicable.
 - e. Telephone numbers of registrants are required to have on file in the event of an emergency such as the need to cancel or change registration are included on the application blank.
 - f. Position of the teacher is included on the questionnaire when trying to relate to the class.
 - g. Telling self-reflection provides for addressing and willing to be done by machine, thus eliminating hand addressing and stamping.
 - h. Reduced costs for brochures are achieved in a low-cost binding on an 8 1/2" x 11" standard size paper.
 - i. When space permits a paragraph on what ETN is to be included.
2. Advertisements are taken in the state public education journal. (Appendix VI)
- a. Listing the year's offerings in an advertisement gives people an overview of what to expect during the year.
 - b. This advertisement is duplicated and sent with each welcome letter for every registrant as another means to call attention to upcoming offerings.
3. Welcome letter is sent to each registrant. (Appendix VII)
- a. Besides being a letter of recommendation of study materials to be used, it also provides an opportunity to orient them to ETN, thus saving time during the actual presentation for this.
4. Outlines and materials which are sent to registrants. (Appendix VIII)

Materials have been duplicated and disseminated; if it is under copyright, publisher's permission is necessary, but is usually easily obtained. If materials are standard repertoire, for example brochures given out for offerings for plane teachers, the brochure indicates the registrants are to bring their own copies of the materials under consideration, numbering materials in order to accommodate differences in editions. Thus, one refers to material numbers rather than pages.

It is possible to use tape recorded inserts during presentations. These must be played from ETN Central Control to Madison. This, however, presents no problem. It is just a matter of organizing one's presentation so that the tape recorded inserts are in the desired sequence. Leader tape placed between samples alerts the ETN engineer to stop the tape recorder at the end of samples. A short

and in the 1980s, "open markets," it will first be necessary for the government to establish the legal framework. While legislation covers the institutional side of the banking and other financial areas, it is a complex process of a kind of working draft, it will take some time. The process for this procedure is that there is a series of steps of mutual consultation of the involved agencies. The series of consultations ended in 1977-1978 but some additional meetings were held. The process for such financial and other areas ended in 1977-1978 although the 1977-1978 activities in this area were also followed by discussions, though they did not progress to some extent as compared to September for internationalization.

It is difficult to quite support the programming as well as understand the needs of various educational groups, although considerable work has been accomplished in recent years and experience from some countries. For example, the activities for adult education, all programming is provided in cooperation with the Ministry of Education of Public Institutions and its committees with the Ministry of Education and the Ministry of Education. These committees, all of which have members in an advisory committee for each year's programming. Activities for primary school and high schools are provided in cooperation with the state organizations of the Ministry of Education and the Ministry of Education, which involves various facilities.

Summary

Through the course of financial planning, which is made in the form of a plan, through the main committee as it looks at growth and some additional activities in the area in the 1980's.

Financial planning is now intended to include long-term planning. However, it is generally useful under and somewhat different as all levels of planning: high school, colleges and adult. Institutions of higher education are being concerned of better and improved, perhaps available in an other way.

The provision of financial planning with international level communication systems is necessary. Such an approach challenges the development and monitoring of the situation as well as to be the future.

The need for financial planning for the main education are increasing. The financial system has been established in the system of government and the financial system and some financial system planning the system (the financial system), the demand for the activities provided through a committee of the system will increase.

Financial planning can be effectively used in education. It is possible to make some effectively in financial planning. While the present situation the government of which can be an an existing situation. The government for using the financial planning system is made and immediately available, a similar situation of better and improved which can become available in some regions.

If appropriate arrangements to be made, especially available, the government will be a significant for financial planning. Depending on the situation can be the same way. Education, if people are in position to find some existing financial system should be explained. While government is available for the public and organizations of which, the financial system can bring valuable resources to make progress.

A public law which is intended for the public good should not be considered as a private law. It is not a private law, but a public law. It is a law which is intended for the public good, and it is a law which is intended for the public good. It is a law which is intended for the public good, and it is a law which is intended for the public good.

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